FIG. 1

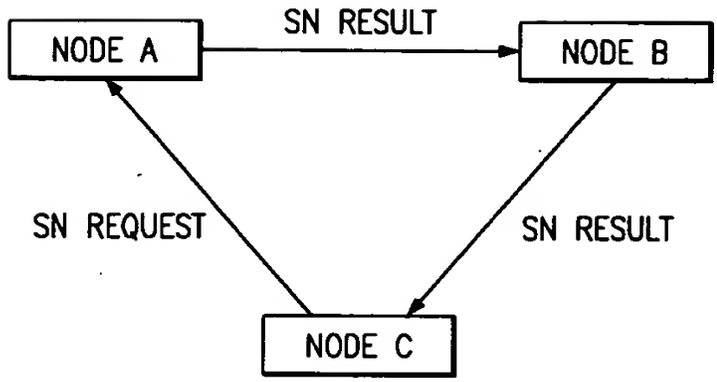

NODE A
SN RESULT
NODE B
SN REQUEST
SN RESULT
NODE C

FIG. 4

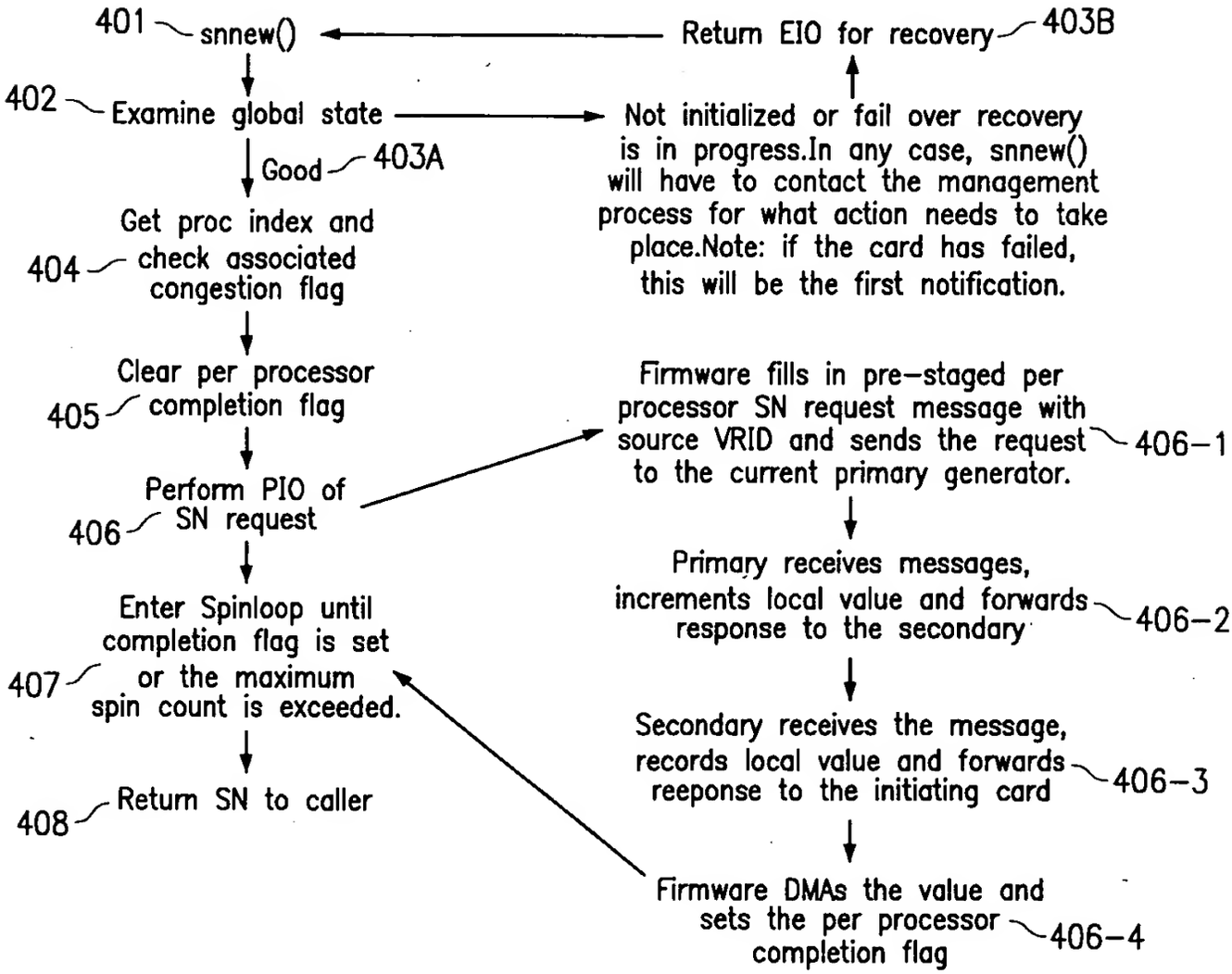

401
snnew()
Return EIO for recovery
403B
402
Examine global state
Not initialized or fail over recovery is in progress.In any case, snnew() will have to contact the management process for what action needs to take place.Note: if the card has failed, this will be the first notification.
Good
403A
Get proc index and check associated congestion flag
404
Clear per processor completion flag
405
Perform PIO of SN request
406
Firmware fills in pre-staged per processor SN request message with source VRID and sends the request to the current primary generator.
406-1
Primary receives messages, increments local value and forwards response to the secondary
406-2
Secondary receives the message, records local value and forwards reeponse to the initiating card
406-3
Firmware DMAs the value and sets the per processor completion flag
406-4
Enter Spinloop until completion flag is set or the maximum spin count is exceeded.
407
Return SN to caller
408

FIG. 2

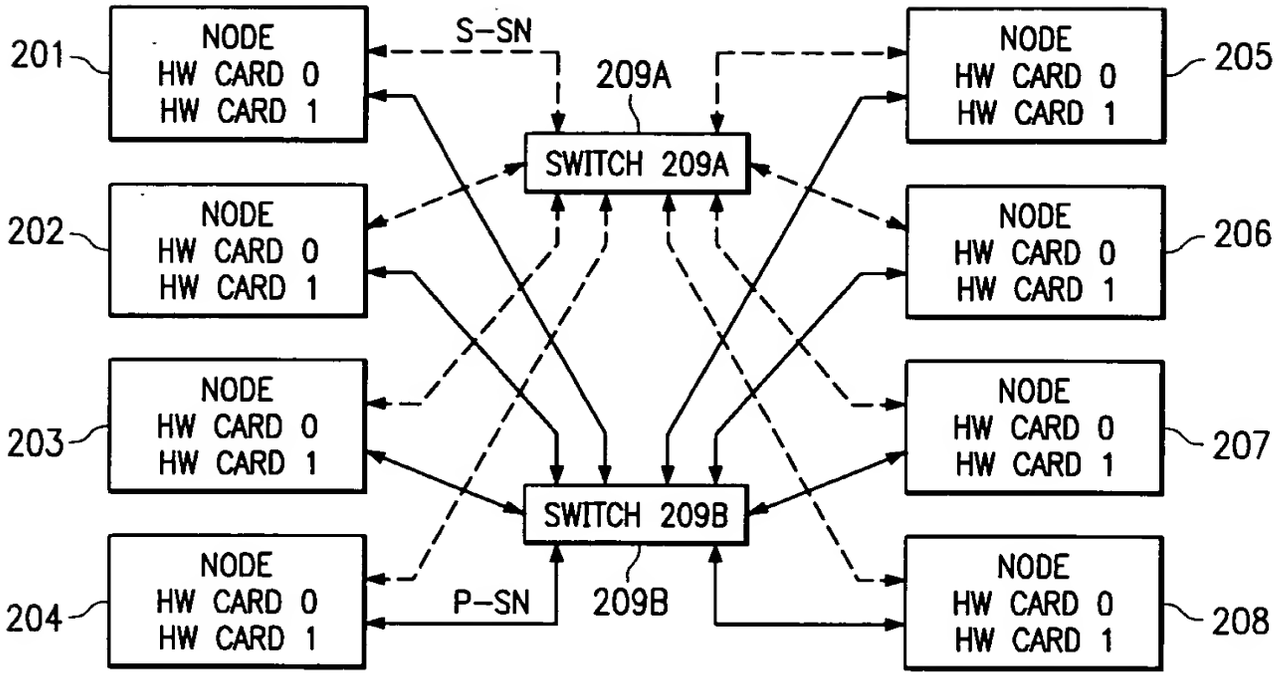
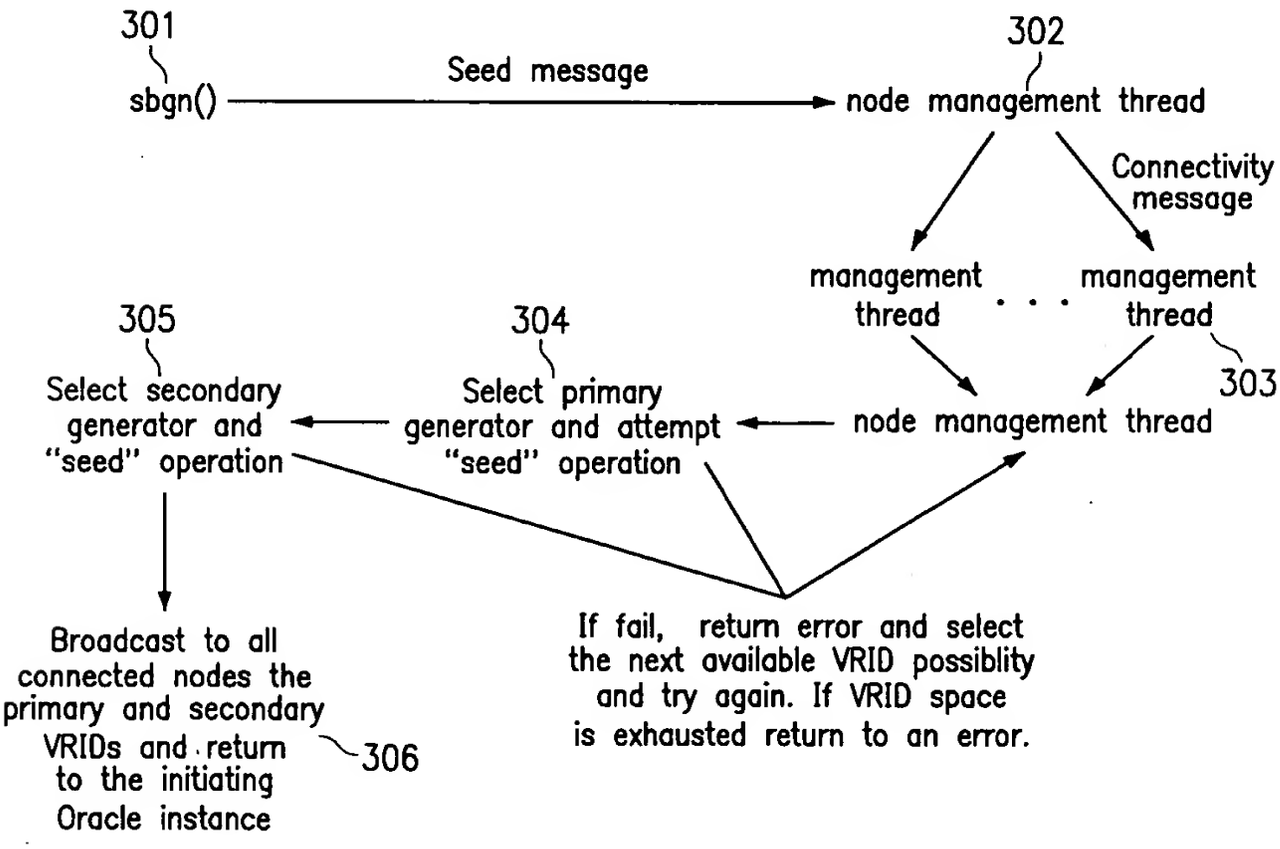

201
NODE
HW CARD 0
HW CARD 1
S-SN
209A
SWITCH 209A
205
NODE
HW CARD 0
HW CARD 1
202
NODE
HW CARD 0
HW CARD 1
206
NODE
HW CARD 0
HW CARD 1
203
NODE
HW CARD 0
HW CARD 1
207
NODE
HW CARD 0
HW CARD 1
SWITCH 209B
204
NODE
HW CARD 0
HW CARD 1
P-SN
209B
208
NODE
HW CARD 0
HW CARD 1

FIG. 3


301
sbgn()
Seed message
302
node management thread
Connectivity message
management thread
management thread
303
305
Select secondary generator and "seed" operation
304
Select primary generator and attempt "seed" operation
node management thread
Broadcast to all connected nodes the primary and secondary VRIDs and return to the initiating Oracle instance
306
If fail, return error and select the next available VRID possiblity and try again. If VRID space is exhausted return to an error.

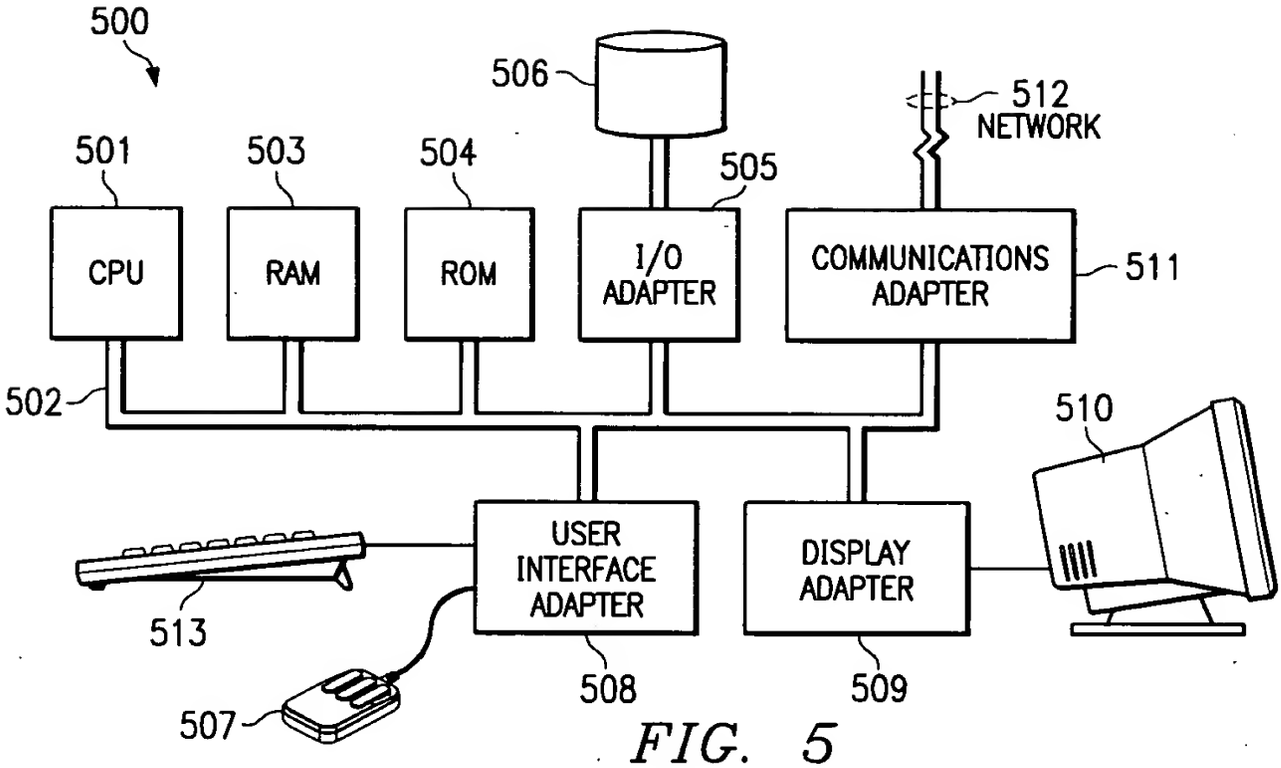

500
506
512
NETWORK
501
503
504
505
CPU
RAM
ROM
I/O
ADAPTER
COMMUNICATIONS
ADAPTER
511
502
510
USER
INTERFACE
ADAPTER
DISPLAY
ADAPTER
513
508
509
507

FIG. 5